ISSUE SUP STAPLE APEA (for additional cross references)

| POSITION            | INITIALS | ED NO. | DATE       |
|---------------------|----------|--------|------------|
| FEE DETERMINATION   | 80       | 71058  | 10.18.99   |
| O.J.P.E. CLASSIFIER |          |        | 5 14-21499 |
| FORMALITY REVIEW    | KYM      | 447 23 | 10/29/aa   |

## INDEX OF CLAIMS

| • | Rejected                   | N | Non-elected  |
|---|----------------------------|---|--------------|
| = | Allowed                    | 1 | Interference |
| - | (Through numeral) Canceled | Α | Appeal       |
| ÷ |                            | 0 | Objected     |

| ſ            | Cla | im.      | Date               |                |          |                                                  |                 |                 |           |          |          | Cla      |   |          | _        |          |          | Das      | _        | _        |               | _        | _        | ì              | C          | 1 | Date     |          |   |          |          |                                                  |          |              |              |            |          |          |
|--------------|-----|----------|--------------------|----------------|----------|--------------------------------------------------|-----------------|-----------------|-----------|----------|----------|----------|---|----------|----------|----------|----------|----------|----------|----------|---------------|----------|----------|----------------|------------|---|----------|----------|---|----------|----------|--------------------------------------------------|----------|--------------|--------------|------------|----------|----------|
| - t          | _   |          | a                  | H              | 7        | 1.4                                              |                 | 1               | -         |          |          | ᅥ        |   |          | _        |          |          |          |          |          |               |          |          |                |            |   |          |          |   |          |          |                                                  |          |              |              |            |          |          |
| - 1          |     | Onfginal | -                  | 1              | 12       | うして                                              |                 |                 |           |          |          |          |   | _        | Original | 1        | ١        | 1        |          | 1        |               |          | 1        |                | 1          | ) | 1_       | Original | 1 |          |          |                                                  |          |              | 1            |            | ٠        |          |
| - 1          | 2   | 5        | 70                 | 5              | 12       | 渂                                                |                 |                 |           |          | Н        | - [      |   | Finel    | ş        |          | - 1      |          |          |          |               |          |          |                | •          |   | E        | Š        | i |          |          |                                                  |          |              |              |            |          |          |
| ļ            | ۲,  | <u>چ</u> | 이                  | ۲,             | ام       | 19                                               | ┝┤              |                 | $\vdash$  | <b>-</b> | $\vdash$ |          |   | -        | 믜        |          |          | _        | _        | Щ        | Щ             |          | Н        | Н              | $\vdash$   | l | ۳        |          | 4 | Н        | Н        | Н                                                |          | Н            | Ш            |            | Ц        | Ш        |
| ļ            | _   |          | 7                  | ×              | Z        |                                                  | -               | Ц               | -         | Щ        | Н        | -1       |   | Ш        | 51       |          |          | _        | _        | -        |               | _        |          | Н              | L          | 1 | ⊢        | 110      | _ |          | Щ        |                                                  |          | Щ            | Щ            | _          |          | Ц        |
| L            |     | N        | 4                  | 1              | V        |                                                  | Ш               |                 | Ц         | Ц        | Ш        | _        | 1 | Ш        | 85       | _        | _4       |          |          |          |               |          |          |                | ᆫ          | 1 | ᆫ        | 112      | _ |          |          |                                                  |          |              | Ц            |            |          | ٠        |
| L            |     | 3        | Ш                  | D.             | V        | Ш                                                |                 |                 |           |          | Ш        | ╝        |   |          | 53       |          |          |          |          |          |               |          | <u></u>  |                |            | ] | Ŀ        | 113      |   |          |          |                                                  |          |              |              |            |          |          |
|              |     | 4        |                    | ${\mathbb T}$  |          |                                                  |                 |                 |           |          |          |          |   |          | 54       |          |          |          |          |          |               |          |          |                |            | ] |          | 114      |   | ï        |          |                                                  |          |              |              |            |          |          |
| <i>y</i> : [ |     | 5        |                    |                | J        | 7                                                |                 |                 |           |          |          |          |   |          | 55       | - 1      |          |          |          |          |               |          |          |                |            |   |          | 115      |   |          |          |                                                  |          | •            |              |            |          |          |
| 1            |     | 6        | J                  | T              | 7        |                                                  | $\Box$          |                 |           |          |          | $\neg$   |   |          | 58       |          |          |          |          | 7.1      |               |          | ·        | 44.            | •          |   | 100      | 116      | - | K        | *        | -                                                | ÷        |              | ·            |            |          |          |
| , [          | 7   | 16       | 7                  | П              | J        | J                                                | П               | $\Box$          |           |          | П        | $\neg$   |   |          | 57       | $\neg$   | 7        |          |          |          |               |          |          |                |            | 1 | Г        | 1117     |   |          | $\Box$   |                                                  |          |              | ·            |            |          |          |
| 3            | _   | 7        | $\bar{\mathbf{n}}$ | H              | Ĭ        |                                                  |                 |                 | Ш         | Ш        |          |          |   | _        | 58       | 7        | 7        |          |          |          |               |          |          |                | $\vdash$   | 1 | Н        | 118      |   |          | _        | _                                                |          |              | М            |            |          | Η        |
| ~ }          | -   | 7        | 1                  | Ħ              | Ž        |                                                  |                 |                 |           | Ш        |          |          |   |          | 59       | -        | -        |          |          |          | $\vdash$      |          |          | Н              | ┢          | 1 | -        | 119      | ٦ | Н        | ┥        | Η.                                               |          |              | Н            | -          |          | Н        |
| 1            | -   | 79       | H                  | H              | 3        | 1                                                | П               |                 | Í         |          | П        | Ξ        |   | ┢        | 60       | -        | ┪        | -        |          | $\dashv$ |               | $\dashv$ | Н        | Н              | -          | 1 | Н        | 110      |   | Н        | Η-       | -                                                | -        | -            | Н            |            | Н        | Н        |
| - 1          | -   | Ť        | 7                  | ╫              | 1        | Ì                                                | Н               | -1              |           | Н        | Н        | ᅥ        |   | $\vdash$ | 81       | $\dashv$ | ┥        | -        | -        | $\dashv$ |               |          | Н        | Н              | -          | ł | Н        | 111      | - | Н        | ┢        | Η.                                               | -        | Η-           | Н            | -          | H        | Н        |
| ŀ            | -   | 7        | Ť                  | ⊬              | 7        | 7                                                | <del>   </del>  | $\dashv$        | $\vdash$  | Н        | Н        | $\dashv$ |   | ├        | 62       |          |          | -1       | Н        | $\dashv$ | Н             | -        | -        | Н              | -          | ł | ⊩        | 112      | - | Н        | ┝        | $\vdash$                                         | $\vdash$ | H            | Н            | -          |          |          |
| ŀ            |     | 13       | ij                 | +              | j        |                                                  | Н               | $\dashv$        | $\dashv$  | Н        | $\vdash$ | $\dashv$ |   | -        | 83       |          |          | ᅱ        | $\dashv$ | $\dashv$ |               | $\dashv$ | -        | Н              | $\vdash$   | 1 | -        | 123      | - | H        | -        | -                                                |          | H            | Н            |            |          | H        |
| ŀ            | _   |          | -                  | <del>   </del> |          | ٠                                                | $\vdash$        | $\vdash$        | $\dashv$  | $\vdash$ | Н        |          |   | ⊢        | 3        | -        |          | _        |          | $\vdash$ | Н             | -        | -        | Н              | $\vdash$   | 1 | ⊢        | -        | 4 | ш        | Ι-       | ۲                                                |          | -            | H            | щ          | ۲        | Н        |
| ٠ }          |     | 14       | +                  | ₩              | 3        | +                                                | $\vdash$        | $\vdash$        | $\vdash$  |          | $\vdash$ | $\dashv$ |   |          | _        | -        |          |          |          | $\dashv$ | H             | -        | H        | Н              | -          | 1 | $\vdash$ | 114      | _ | ⊢        | ├-       | <del> </del>                                     | ⊢        | H            | H            | Н          | -        | Н        |
| ٠,           | 4   | 15       | +                  | 4              | ۲,       | 1                                                | $\vdash \vdash$ | Щ               | $\square$ | Ш        | Н        | 4        |   | ├        | 65       |          | _        | _        |          | _        | -             | _        | Щ        | -              | <u> </u>   | 1 | -        | 115      | _ | Ŀ        | Ľ        | <del> </del>                                     | ┡        | <b>—</b>     | L            | Щ          | ۰.       | <b>-</b> |
|              |     | 13       | 1                  | 4              | Į.       | V                                                | Ш               | Ш               | $\square$ | Ш        | Ц        | $\dashv$ |   | <u> </u> | 66       | _        | _        |          |          | -        |               | _        | Щ        | Ш              | <b>!</b>   | ı | <u></u>  | 116      |   | Ш        | <b>!</b> | ١.                                               | L        | <b>L</b>     | Щ            | Ш          | لـــا    | <b>—</b> |
| Ļ            |     | 17       | 1                  | Щ              | J        | C                                                | Ш               |                 |           |          | Ц        | $\Box$   |   |          | 67       |          |          |          |          |          |               |          |          |                | <u> </u>   |   | L        | 117      |   |          | L        | L                                                | Ŀ        | Ŀ            |              |            |          |          |
| L            | _9  |          | ✓                  | IL             | y        | V                                                |                 |                 |           |          |          |          |   |          | 68       |          | _ l      |          |          |          |               |          |          |                | <u> </u>   | J | L        | 118      |   |          | <u> </u> | L                                                |          | L            |              |            |          |          |
| Γ            |     | 70       | 1                  | IT             | J        | 1                                                | П               |                 |           | П        | П        | $\neg$   |   |          | 69       | $\neg$   | ╗        |          |          |          |               |          |          | Г              |            | 1 | Г        | 119      |   |          | Г        | Γ                                                | Г        | Г            |              |            |          |          |
| Ī            | 7   | 8        | Т                  | Т              | V        |                                                  | П               | П               |           |          | П        | $\neg$   |   |          | ю        | $\neg$   | 7        |          |          |          |               |          |          |                |            | 1 | Г        | 120      |   |          | Г        | Г                                                | Г        | Г            |              |            |          |          |
| t            | -   | X        | 1                  | H              | 1        | 1                                                | H               | -               |           |          | H        | $\dashv$ |   |          | 71       | 7        | 7        |          | -        |          |               |          |          | Н              | Н          | 1 | Н        | 121      | _ | $\vdash$ | 1-       |                                                  | $\vdash$ | t-           |              |            |          | $\vdash$ |
| ŀ            |     | X        | 7                  | +              | 7        |                                                  | Н               |                 |           |          | Н        | -        |   | Н        | 72       |          |          |          | -        | Н        |               |          |          | •              | -          | 1 | Н        | 122      | _ | Н        | ╌        | †÷                                               | Н        | <del> </del> | Н            |            | H        | ⊢        |
| ŀ            | -   |          |                    | #              | 1        |                                                  | $\vdash$        | Н               | $\dashv$  |          | $\vdash$ | ᅥ        |   | ┝        | 73       |          | $\dashv$ |          | Н        | Н        | -             | Н        | _        | $\vdash$       | ┥          | 1 | $\vdash$ | 123      | _ | ⊢        | ╌        | ┼-                                               | ┝        | 1-           | ╁╌           |            | ┝╌       | ⊢        |
| - }          | }   | ā        | Ų.                 | ┰              | 7        | 1                                                | <del>├</del>    | Н               | $\vdash$  | -        | ┝┥       | ᅥ        |   | ⊢        | 74       | $\dashv$ | $\dashv$ |          | -        | Н        | $\overline{}$ | -        |          | Н              | ⊢          | ł | $\vdash$ | 124      | _ | Н        | ╁        | ┿                                                | ⊢        | ┝            | -            | -          | ┝        | ┝        |
| ł            |     |          | 24                 | ~              | 1        | 1                                                | Н               | Н               | Н         | -        | $\vdash$ | Н        |   |          | 75       | $\dashv$ | $\dashv$ | -        | _        | Н        | _             | -        | _        | -              | ├-         | 1 | ⊢        | 125      |   | -        | ┢        | ╀                                                | ⊢        | ├            | -            | $\vdash$   | ⊢        | <u> </u> |
| - 1          |     | 8        | $\vdash$           | ⊢              | -        | ı                                                |                 | -               | Н         |          |          | -1       |   | ⊢        | 76       | -        | $\dashv$ | -        | -        | Н        | H             | -        | -        | -              | ١-         | 1 | ⊢        |          | _ | ⊢        | ├        | ⊢                                                | -        | ├            | -            | -          | ┝        | ⊢        |
| -            | -   | 20       |                    | <u> </u>       | Ž        |                                                  | ⊢               | $\vdash$        | Щ         |          | $\vdash$ |          |   | ⊢        |          | -        |          | Щ        | _        | Н        |               |          |          |                | ┞-         | 1 | $\vdash$ | 126      |   | ├-       | Ŀ        | ┡                                                | -        | ┡            | -            | <b>-</b>   | ├-       | ┡-       |
| 4            |     | X        | _                  | _              | 1        | Y                                                | Ш               | $\Box$          | Щ         | _        | Н        | _        |   | <u> </u> | 77       | _        | _        |          |          | _        |               |          | _        | _              | <b>!</b> _ | - | $\vdash$ | 127      | _ | L        | ↓_       | <u> </u>                                         | ┡        | ↓_           | $\vdash$     | <u> </u>   | <b>!</b> | ┞_       |
|              |     | 21       |                    |                | L        | V                                                |                 | Ц               |           |          | Ш        | $\dashv$ |   |          | 78       | _        | _        |          | _        |          |               |          |          |                | ┖          | 1 | $\vdash$ | 128      |   | <u>_</u> | Ŀ        | ╙                                                | L        | ┞_           | <u> </u>     | L_         | L.       | L        |
| 믝            |     | 29       |                    | ᆫ              | <u> </u> | L                                                | Ш               |                 |           |          | Ш        |          |   | L        | 79       |          |          |          |          |          | L             |          |          | L              | L          | ] | L        | 129      |   | _        | L        | L                                                | L        | 1_           | L            |            | L        | L_       |
|              |     | 30       |                    | L              | L        | L                                                | Ш               |                 |           | L        |          |          |   | _        | 70       |          |          |          |          |          |               |          |          |                | L          | ] | $\perp$  | 130      |   | L        | L        | L                                                | L        | L            | L            | L          | L.       | L        |
|              |     | 31       |                    | L_             | <u> </u> | 1_                                               |                 |                 |           |          |          |          |   | L        | 81       |          |          |          |          |          |               |          |          |                |            | ] | L        | 131      | _ | L        | L.       | L                                                | <u>L</u> | L            |              |            | L        | L        |
| Ţ            |     | 32       |                    |                |          | Π                                                | $\Box$          |                 |           |          | П        |          |   |          | 82       |          |          |          |          |          |               |          |          | Γ              | Г          | ] | Г        | 132      |   | Π        | П        | Г                                                |          | L            | $\Gamma$     |            |          | Г        |
| ı            |     | 33       |                    | Γ              | $\Gamma$ |                                                  |                 |                 |           |          |          |          |   |          | 63       |          |          |          |          |          |               |          |          |                |            | ] |          | 133      | _ |          | Г        |                                                  |          | Γ            |              |            |          | Γ        |
| - 1          |     | 34       | $\Box$             |                | Г        |                                                  |                 |                 |           |          | П        |          |   | Г        | 84       |          |          |          |          |          |               |          |          | Г              | Γ          | 1 |          | 134      |   |          | 1        | Г                                                |          | Π            |              | Г          | Γ        |          |
| ı            | 7   | 35       | _                  |                | $\vdash$ | 1                                                |                 |                 |           |          | П        | $\dashv$ |   |          | 65       | $\neg$   |          |          |          |          |               | $\Box$   |          | 1              | Г          | 1 | Г        | 135      |   | Г        | Г        | Г                                                | Γ        |              |              | Г          | Г        |          |
| t            | -1  | 36       |                    |                |          | $\overline{}$                                    | П               | Н               | Н         | _        | Η        | 7        |   |          | 86       |          |          | $\neg$   |          |          |               | П        |          |                | Г          | 1 |          | 136      | _ | Г        | Т        | Г                                                | Γ        |              | Т            | _          | Г        | Γ        |
| Ì            | 7   | 37       |                    | $\vdash$       |          | 1                                                |                 | $\Box$          | Н         | Ε.       | $\vdash$ | $\dashv$ |   | $\vdash$ | 87       | $\vdash$ | $\neg$   | Н        |          | П        |               |          | Т        | $\vdash$       | Т          | 1 | $\vdash$ | 137      |   |          | Г        | ١                                                | ١        | 1            |              | Γ          | Γ        |          |
| ł            | ᅥ   | 38       | H                  | $\vdash$       | 1        | +-                                               | Н               | Н               | Н         |          | -        | $\dashv$ |   | $\vdash$ | 68       | -        |          | Н        |          | Н        |               | Н        | $\vdash$ | 1              | t          | 1 | $\vdash$ | 38       | _ | Н        | ٢        | t                                                | Т        | 1            |              | М          | T        | 1        |
| ŀ            | -1  | 39       | -                  | Η-             | $\vdash$ | <del>                                     </del> | $\vdash$        | $\vdash$        | $\vdash$  | $\vdash$ | $\vdash$ | $\dashv$ |   | $\vdash$ | 89       | H        | $\dashv$ | H        | -        | H        |               | H        | -        | 1              | 1-         | † | ┢        | 139      |   | 1        | 1-       | <del>                                     </del> | 1        | †            | 1            | ┪          | ۲        | 1        |
| ŀ            |     | 42       | Н                  | $\vdash$       | -        | -                                                | Н               | $\vdash \vdash$ | Н         | -        | -        | Н        |   | -        | 90       | $\vdash$ | $\dashv$ | -        | -        | $\vdash$ |               | H        | $\vdash$ | -              | $\vdash$   | 1 | $\vdash$ | 40       | - | -        | ┢        | 1-                                               | 1-       | !            | 1            | ┪          | 1-       | -        |
| ŀ            | _   | _        | _                  | <u> </u>       | -        | <u> </u>                                         | Н               | $\vdash$        | $\vdash$  | <b>-</b> | $\vdash$ |          |   | ⊢        |          |          |          | Н        | -        | $\vdash$ |               | Н        | -        | <del>} -</del> | -          | 1 | $\vdash$ | _        |   | 1        | ┪        | ┼-                                               | ⊢        | +            | -            | -          | -        | -        |
| L            | _   | 41       | _                  | <u> </u>       | <u> </u> | <u>Ş</u> _                                       | ⊢               | Ш               | Ш         | _        | Ш        | _        |   | _        | 91       |          | _        | Щ        | $\sqcup$ | Ш        | $\vdash$      | Ы        | Ш        | <u></u>        | -          | 4 | -        | 141      | _ | <u> </u> | 1        | ₽                                                | <b>!</b> | <b>├</b>     | <del> </del> | ├          | 1        |          |
| Ļ            | _   | 42       | _                  | _              | _        | <b>!</b>                                         | Ц               | Ш               | Ш         |          | Ц        | $\Box$   |   | L        | 92       | $\Box$   |          |          |          | Ш        | Ш             | Ш        |          |                | 4          | 1 | $\vdash$ | 142      |   | _        | 1_       | 1_                                               | ┞        | <b>!</b>     | <b> </b>     |            | _        |          |
|              | _   | 43       | _1                 | _              | 4        | L                                                | Ц               | Ш               |           | Ш        | Ц        | $\Box$   |   | oxdot    | 93       |          | _        | Щ        |          | Ш        | Щ             | Ш        | _        | _              | L          | 1 | _        | 143      | _ | 1        | _        | ┖                                                | ╙        | 1            | 1_           | <b>!</b> _ | <b>L</b> | _        |
| L            | _ [ | 44       | 1                  |                | L        | L                                                | $\sqcup$        |                 |           |          |          |          |   |          | 94       |          |          |          |          |          |               |          | L        |                | L          | ] |          | 144      |   | 1_       | 1_       | L                                                | 1_       | 1_           | 1_           | L          | L        | L        |
| ſ            |     | 45       |                    |                |          |                                                  |                 |                 |           |          |          |          |   |          | 95       |          |          |          |          |          |               |          |          | C              | $\Box$     | ] |          | 145      |   | L        |          | Ĺ                                                | Ĺ        |              |              | Ĺ          | Ĺ        |          |
| Γ            |     | 48       |                    |                |          |                                                  |                 |                 |           |          |          |          |   |          | 96       |          |          |          |          |          |               |          |          |                |            | ] |          | 146      |   |          |          |                                                  |          |              |              |            |          |          |
| Γ            | П   | 47       | $\neg$             |                |          |                                                  | П               |                 |           |          | П        | $\neg$   |   | Г        | 97       |          |          |          |          |          |               |          |          |                |            | 1 | Г        | 147      |   | Γ        | Γ        | Г                                                | Γ        | Γ            |              |            | Γ        | $\Box$   |
| -            | -   | 48       | -1                 |                |          | Г                                                | П               |                 | $\neg$    | П        | $\vdash$ | ᅱ        |   |          | 98       | 7        | _        |          |          |          |               |          |          |                | Г          | 1 | Г        | 148      | _ | Γ        | Т        |                                                  | Г        | Г            | Г            | Г          |          | Γ        |
| 1            |     | 49       | -                  | _              | <u> </u> |                                                  | $\Box$          | -               |           |          |          | ᅥ        |   | М        | 99       | $\dashv$ | $\dashv$ | $\dashv$ | _        |          |               |          |          |                | Г          | 1 |          | 749      |   | _        | Г        | Г                                                | Γ        | 1            |              | Г          | Γ        | Г        |
| r            |     | 50       | 7                  |                | _        |                                                  | $\Box$          | -1              | -         |          | $\vdash$ | -1       |   | 1        | 100      | -1       |          | $\neg$   | $\neg$   |          |               |          |          |                | 1          | 1 |          | 150      |   |          | Т        | 1                                                | Г        |              |              |            |          |          |
| _            |     |          |                    |                | _        | -                                                |                 |                 |           | _        |          |          |   |          |          |          |          |          |          |          |               |          |          | _              | _          | • | _        |          |   |          |          |                                                  |          |              |              |            |          |          |

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